

# Coal Fly Ash Release

## Fact Sheet



*Revised as of June 23, 2009*

A number of agencies from the state of Tennessee responded immediately to the Tennessee Valley Authority (TVA) coal ash release in Kingston on Dec. 22, 2008 and will continue to be engaged over the long term. In addition, the U.S. Environmental Protection Agency (EPA) issued an Administrative Order on Consent in May 2009 to oversee cleanup at the site under the federal Superfund law. The enforcement order issued by the Tennessee Department of Environment and Conservation (TDEC) in January 2009 continues to be fully enforceable, and TDEC and EPA are working closely together and with other state and federal agencies partnering to protect public health and address environmental issues as cleanup at the site continues.

- **Federal and State Oversight of Cleanup**

Both EPA and TDEC have on-scene coordinators working at the TVA Kingston cleanup site. This allows the two agencies to coordinate and provide direct oversight to the ongoing cleanup and environmental monitoring activities that fall under each agency's jurisdiction.

Under EPA's May 2009 administrative order, EPA, in consultation with TDEC, is overseeing the removal of coal ash from the Emory River and surrounding areas. TVA's work at the site is subject to review and approval by the oversight agencies to ensure full compliance with the federal Superfund law. Once the removal of ash is complete, TVA will be required to assess any remaining contamination so EPA and TDEC can determine whether additional actions may be needed.

In addition, TDEC's enforcement order requires that TVA cooperate with the state in supporting independent assessments and inspections at Kingston and other TVA coal-waste sites in Tennessee, as well as the development of a corrective action plan detailing the steps TVA will take to clean up the Kingston site and ensure safe operations in the future.

The corrective action plan was submitted to TDEC and is available on the department's Web site. The order requires the plan to describe the procedures TVA will use to safely manage the ash in both the short and long term.

Corrective actions are ongoing at the site and TDEC and EPA will be requiring changes be made to the corrective action plan. The revised plan will be available for public review when it has been completed and submitted.

In addition to EPA, TDEC coordinates closely with the Tennessee Department of Health (TDH), which analyzes the samples collected by TDEC at their laboratory. TDH is working with the federal Agency for Toxic Substances and Disease Registry (ATSDR) to provide a public health assessment to determine whether potential adverse health effects may be caused by the coal ash release. TDH has conducted a door-to-door health survey and shared that information with local residents, and has contacted area medical practitioners to share information.

The Tennessee Wildlife Resources Agency (TWRA) is conducting fish and wildlife surveys in the area near the coal ash spill.

- **Cleanup Efforts**

TDEC and EPA are coordinating closely on cleanup efforts at the site. Each of the agencies has areas of primary responsibility:

**Ash removal from Emory River and embayments, cenosphere recovery and shoreline cleanup** – EPA Lead. With EPA's oversight, the amount of ash dredged from the Emory River is increasing and is expected to reach more than 15,000 cubic yards per day. The ash is temporarily stored onsite. EPA's decision concerning off-site, out-of-state disposal by rail is expected soon and will be consistent with Subtitle D Class I landfill requirements.

**Cleanup of coal ash on ground surface** – EPA Lead, with TDEC assistance. Once the removal of ash is complete, TVA will be required to assess any remaining soil contamination and determine if additional corrective actions is required.

**Coal ash disposal** – EPA and TDEC. Under the EPA administrative order, all coal ash must be disposed at RCRA Subtitle D Landfills that are in regulatory compliance. Out-of-state shipments require approval by EPA and the receiving state. In-state disposal will require EPA and TDEC approval. Proposals to dispose of coal ash in existing Tennessee Class I landfills require department review and special waste approval. TDEC will contact the community prior to ash being shipped. Any receiving site must be equipped with liners and leachate collection systems. For any in-state site that requires a new permit or major permit modification, TDEC will provide public participation opportunities as outlined in the solid waste regulations.

**Closure of failed ash landfill** – TDEC lead, with EPA assistance. TVA must assess the stability of the remaining ash in the failed landfill cell and submit a landfill closure plan for consideration. TDEC has not received this plan. The closure plan will be based on the results of remaining landfill structural integrity and stability analysis and may include a proposal to remove the remaining ash in the landfill offsite, or propose leaving ash in place. TDEC will not approve any final closure plan without providing for public participation.

- **Environmental Monitoring and Sampling**

Both TDEC and EPA are conducting environmental monitoring and sampling activities in and around the Kingston site, as discussed below. Detailed monitoring results may be found on TDEC's TVA Kingston Update Web site under, "Results Reporting."

**Air** – In addition to auditing TVA's air monitoring activities, TDEC's Division of Air Pollution Control has monitors on Lake Shore Drive for independent analysis. All sample results for particulates indicate air quality meets National Ambient Air Quality Standards. Lab analysis has detected some metals at very low levels. The Department of Health indicates these levels do not cause health concerns.

**Drinking Water and Well Water** – Ensuring a safe drinking water supply has been a priority of the state since the release occurred. TDEC collected daily samples of river water and treated drinking water at the Kingston and Rockwood water treatment plants between January 2-22. TDEC continues to conduct weekly sampling at

each plant. In addition, each water treatment plant routinely samples raw and treated water. To date, all sample results indicate drinking water meets drinking water standards established by EPA for public health protection.

TDEC also sampled more than 100 private wells within a four-mile radius of the spill site for metals. Samples were analyzed for contaminants contained in coal ash. Results are shared directly with the property owners once they are reported from the laboratory. None of the water wells had metals present above the primary drinking water standards. TDEC has selected a group of water wells to monitor periodically to continue to evaluate ground water quality.

**River Water** – EPA and TDEC are monitoring water quality in the Emory, Clinch and Tennessee Rivers, particularly during dredging. TDEC continues twice weekly sampling. Metals levels were highest immediately following the spill and whenever the ash has been resuspended in the water column by heavy rainfall, such as the rain even in early May, or disturbances such as boat traffic. Generally, higher metals have been observed to be associated with solids in water samples.

**Fish Tissue Monitoring** – The Tennessee Wildlife Resources Agency collected fish in January, February, March and April of this year. Fish tissue was analyzed by an EPA certified laboratory for metals associated with coal ash. Two catfish samples were found to have metals present above human health protection standards for Mercury. Selenium levels in fish caught in the rivers are well below EPA's proposed toxicity standards for protection of fish and other aquatic life.

We urge the public to follow the fishing advisory for the lower Clinch River, which existed prior to the ash spill. In the Clinch River arm of Watts Bar, which includes the lower Emory River, there is a fish consumption advisory against eating striped bass and a precautionary advisory for catfish and sauger. A precautionary advisory means that children, pregnant women and nursing mothers should not consume the fish species named. All other persons should limit consumption of the named species to one meal per month.

Given the data generated to date, the existing fishing advisory is protective of public health. The state will continue to monitor the levels of contaminants in fish tissue and will inform the public if current conditions change.

## • Cause Investigation and Analysis

As outlined in the TDEC enforcement order, the department is completing a comprehensive review of the Kingston landfill failure, evaluating the structural integrity and stability of other TVA coal ash impoundments in Tennessee and reviewing coal ash disposal regulations to improve coal ash management in Tennessee.

TDEC formed an advisory group to provide additional expertise in its structural integrity and stability analysis. Participants include representatives from the University of Tennessee, geotechnical consultants from SAIC, EPA and the U.S. Army Corps of Engineers.

In the coming weeks, the advisory group will provide an independent assessment of the primary cause of the TVA Kingston landfill failure. When complete, that assessment will be publicized, available in the community and posted on the TVA Kingston Update page of TDEC's Web site at [www.tn.gov/environment](http://www.tn.gov/environment). The advisory group will utilize the information gained from the Kingston analysis to recommend regulatory changes in the design, construction, operation, and monitoring of coal ash facilities. Those recommendations, along with guidance expected from a separate regulatory review by EPA, will guide the future of coal ash management in Tennessee.

## TDEC Local Office

TDEC has established a local office at the Roane County Health Department facility for community contacts. The Roane County Health Department building is located at 1362 N. Gateway Ave. in Rockwood. TDEC staff may be reached by calling 865-354-1220, ext. 103.

## EPA Community Involvement Coordinator

EPA has a community involvement coordinator to assist the community. Stephanie Y. Brown may be reached at 800-564-7577 or 678-575-8505.

## Useful Web sites

### Tennessee Department of Environment and Conservation:

<http://www.tn.gov/environment>  
(“TVA Kingston Update” Link)

### Environmental Protection Agency:

<http://www.epakingstontva.com>

### Tennessee Department of Health:

<http://www.tn.gov/health>

### TVA:

<http://www.tva.gov/kingston>

## Important Numbers

TDEC:	888-891-8332
EPA Community Involvement Coordinator:	800-564-7577
TN Dept. of Health:	800-404-3006
Roane Co. Health Dept.:	865-354-1220
TVA Public Information:	865-717-4006
TVA Outreach Office:	865-632-1700

### If you have questions, contact:

**Tennessee Department of  
Environment and Conservation  
888-891-8332**

Updates, including sample results,  
monitoring plans, and the enforcement  
order are available on the Internet at:  
[www.tn.gov/environment](http://www.tn.gov/environment)  
under “TVA Kingston Update.”

